

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Listing of Claims:

Claim 1 (Cancelled).

Claim 2 (Previously Presented): A method for packet communication, comprising:

before a first node moves from a first network to a second network

receiving a first packet from said first node in said first network by a first address changing device in said first network, said first packet including a private sender address corresponding to said first node and destination address information corresponding to another node in a third network,

changing said private sender address of said received first packet by the first address changing device from said private sender address to a global address, the changing performed by mapping the global address to the private sender address with first translation information held within said first address changing device, and

sending the changed first packet from the first address changing device to the another node;

after said first node moves from said first network to said second network

receiving a second packet from the first node by a second address changing device in said second network, said second packet including said private sender address and said destination address information corresponding to the another node in the third network,

sending a notification message from the second address changing device to the first address changing device indicating that the first node has contacted the second address changing device,

sending sender address translation information from said first address changing device to said second address changing device so as to create second translation information in said second address translation device,
changing said private sender address of said received second packet by the second address changing device from said private sender address to said global address, the changing performed by mapping the global address to the private sender address by said second translation information held within said second address changing device, and
sending the changed second packet from the second address changing device to the another node; and
periodically exchanging updated translation information between said first and second address changing devices.

Claim 3 (Previously Presented): A method for packet communication according to claim 2, further comprising:

before said first node moves from said first network to said second network,
receiving in said first address changing device a return packet from said another node in the third network, said return packet including said global address as a destination address, and
changing said global address of said received return packet by the first address changing device from said global address to said private sender address, the changing performed by mapping the global address to the private sender address by said first translation information held within said first address changing device.

Claim 4 (Previously Presented): A method for packet communication according to claim 2, further comprising:

after said first node moves from said first network to said second network receiving in said first address changing device a return packet from said another node in the third network, said return packet including said global address as a destination address,
forwarding said received return packet from said first address changing device to said second address changing device, and
changing said global address of said received return packet by the second address changing device from said global address to said private sender address, the changing performed by mapping the global address to the private sender address by said second translation information held within said second address changing device.

Claim 5 (Previously Presented): A method for packet communication according to claim 2, wherein said step of sending sender address translation information from said first address changing device to said second address changing device so as to create second translation information in said second address translation device comprises:

a first step of at least one of
detecting by the second address changing device that a registration request is sent from said first node to a foreign agent configured to manage said second network,

detecting by the second address changing device that a response indicating that said first node is registered has been sent from a home agent configured to manage said first network to said foreign agent configured to manage said second network, and

monitoring a timer in at least one of said first and second address changing device; and

a second step of requesting by the second address changing device in the second network that the first address changing device sends to the second address changing device the sender address translation information.

Claim 6 (Previously Presented): A method for packet communication according to claim 2, further comprising:

adding an address translation information request for requesting the global address mapped to the private sender address to a registration request sent from a foreign agent configured to manage said second network to a home agent configured to manage said first network.

Claim 7 (Cancelled).

Claim 8 (Previously Presented): A method for packet communication, comprising:
receiving a packet including a private sender address from a first node located in a first network, the first network including a first address changing device which receives the packet;

changing the address of said received packet by the first address changing device from said private sender address to a first global address by mapping the first global address to the private sender address by translation;

sending by the first address changing device said packet whose sender address has been changed to a third network different from said first network and a second network, the second network including a second address changing device;

receiving by the first address changing device a packet including a second global address, different from said first global address, from a second node which has been moved into said first network from the second network which is different from said first network;

notifying periodically the first address changing device by the second address changing device and the second address changing device by the first address changing device of an address translation information between said private sender address and said first global address after said changing of the address; and

sending by the first address changing device said packet received from said second node to the third network without changing an address of said packet received from said second node from said second global address to said first global address.

Claims 9-10 (Cancelled).

Claim 11 (Previously Presented): A method for packet communication, comprising:
before a first node moves from a first network to a second network

receiving a first packet from the first node in the first network by a first address changing device in said first network, said first packet including a private sender address corresponding to said first node and destination address information corresponding to another node in a third network,

changing said private sender address of said received first packet by the first address changing device from said private sender address to a global address, the changing performed by mapping the global address to the private sender address with first translation information held within said first address changing device, and

sending the changed first packet from the first address changing device to the another node; and

after said first node moves from said first network to said second network receiving in the first address changing device a notification message from a second address changing device in the second network indicating that the first node has contacted the second address changing device, sending sender address translation information from said first address changing device to said second address changing device so as to create second translation information in said second address translation device, thereby enabling a changing by the second address changing device of said private sender address of a second packet by the second address changing device from said private sender address to said global address, and enabling a relay of the changed second packet from the second address changing device to the another node, and periodically exchanging updated translation information between said first and second address changing devices.

Claim 12 (Previously Presented): The method of Claim 11, further comprising: before said first node moves from said first network to said second network, receiving in said first address changing device a return packet from said another node in the third network, said return packet including said global address as a destination address; and changing said global address of said received return packet by the first address changing device from said global address to said private sender address, the changing performed by mapping the global address to the private sender address by said first translation information held within said first address changing device.

Claim 13 (Previously Presented): The method of Claim 11, further comprising:

after said first node moves from said first network to said second network receiving in said first address changing device a return packet from said another node in the third network, said return packet including said global address as a destination address; and

forwarding said received return packet from said first address changing device to said second address changing device without changing said global address to said private sender address.

Claim 14 (Previously Presented): The method of Claim 11, wherein said step of sending sender address translation information from said first address changing device to said second address changing device comprises:

a first step of at least one of

receiving notification of a detection by the second address changing device of the second network that a registration request is sent from said first node to a foreign agent configured to manage said second network,

receiving notification of a detection by the second address changing device in the second network that a response indicating that said first node is registered has been sent from a home agent configured to manage said first network to the foreign agent configured to manage said second network, and

processing timer information corresponding to a timer in at least one of said first and second address changing device; and

a second step of receiving a request from the second address changing device that the first address changing device send to the second address changing device the sender address translation information.

Claim 15 (Previously Presented): A method for packet communication, after a first node moves from a first network to a second network, said first network including a first address changing device configured to a) receive a first packet from the first node, said first packet including a private sender address corresponding to said first node and destination address information corresponding to another node in a third network, b) change said private sender address of said received first packet from said private sender address to a global address by mapping the global address to the private sender address by first translation information held within said first address changing device, and c) send the changed first packet from the first address changing device to the another node, the method comprising:

receiving a second packet from the first node by a second address changing device in said second network, said second packet including said private sender address and said destination address information corresponding to the another node in the third network;

sending a notification message from the second address changing device to the first address changing device that the first node has contacted the second address changing device;

receiving sender address translation information from said first address changing device at said second address changing device so as to create second translation information in said second address translation device;

changing said private sender address of said received second packet by the second address changing device from said private sender address to said global address, the changing performed by mapping the global address to the private sender address by said second translation information held within said second address changing device;

sending the changed second packet from the first address changing device to the another node; and

periodically exchanging updated translation information between said first and second address changing devices.

Claim 16 (Previously Presented): The method of Claim 15, further comprising:
receiving from said first address changing device a return packet sent to said first
address changing device from said another node in the third network, said return packet
including said global address as a destination address; and

changing said global address of said received return packet by the second address
changing device from said global address to said private sender address, the changing
performed by mapping the global address to the private sender address by said second
translation information held within said second address changing device.

Claim 17 (Previously Presented): The method of Claim 15, further comprising:
wherein said step of receiving sender address translation information from said first
address changing device at said second address changing device so as to create second
translation information in said second address translation device comprises:

a first step of at least one of

detecting by the second address changing device that a registration request is
sent from said first node to a foreign agent configured to manage said second
network,

detecting by the second address changing device in the second network that a
response indicating that said first node is registered has been sent from a home agent
configured to manage said first network to said foreign agent configured to manage
said second network, and

monitoring a timer in at least one of said first and second address changing
device; and

a second step of requesting by the second address changing device that the first address changing device sends to the second address changing device the sender address translation information.

Claim 18 (Previously Presented): A computer program product on a tangible computer medium, comprising:

instructions to cause a computer controlled device to carry out the method recited in any one of Claims 11-14.

Claim 19 (Previously Presented): A computer program product on a tangible computer medium, comprising:

instructions to cause a computer controlled device to carry out the method recited in any one of Claims 15-17.

Claim 20 (Previously Presented): A packet communication device, comprising:
an address changing device configured to perform the method recited in any one of Claims 11-14.

Claim 21 (Previously Presented): A packet communication device, comprising:
an address changing device configured to perform the method recited in any one of Claims 15-17.

Claim 22 (Currently Amended): A communication system, comprising:
a first address changing device in a first network configured to change a sender address of a packet from a local address to a global address, the packet sent from a node in the first network; and

a global address sending device in the first network configured to send said global address, used for the node when the node was in the first network, to a second address changing device in a second network when the node moves from said first network to said second network, and configured to periodically notify the second address changing device of address translation information between said sender address and said global address after said first address changing device changed the address.

Claim 23 (Previously Presented): A communication system, comprising:

a first address changing device in a first network configured to change a sender address of a packet from a local address to a global address, the packet sent from a node in the first network; and

a global address receiving device in a second network configured to receive said global address, used for the node when the node was in the first network, from said first address changing device when the node moves from said first network to said second network, and configured to periodically receive from the first address changing device address translation information between said sender address and said global address after said first address changing device changed the address.